

Application No. 09/682865
Page 2

Amendment
Attorney Docket No. S63.2B-9720-US01

Amendments To The Claims:

Claim 1. (Currently Amended) A device for configuring an inflatable balloon of a balloon catheter assembly, the device comprising:

a body comprising a plurality of inflatable members defining a channel therebetween, the channel sized to accommodate at least a portion of a balloon catheter, each inflatable member having a balloon contacting portion, ~~the inflatable members constructed and arranged such that no contacting portion encircles the balloon~~

wherein each inflatable member extends part of the way about the channel but does not encircle the channel.

Claim 2. (Original) The device of claim 1 wherein the inflatable members are disposed about the circumference of a circle.

Claim 3. (Original) The device of claim 1 comprising at least three inflatable members.

Claim 4. (Original) The device of claim 3 wherein the inflatable members are generally tubular and have a circular cross-section.

Claim 5. (Currently amended) A device for configuring an inflatable balloon of a balloon catheter assembly, the device comprising:

a body comprising a plurality of inflatable members defining a channel therebetween, the inflatable members arranged side-by-side about the channel, each of the inflatable members extending only part of the way about the channel, the channel sized to accommodate at least a portion of a balloon catheter, each inflatable member having a balloon contacting portion, the inflatable members inflatable from a first size to a second size in which the balloon contacting portions apply an inward force to a balloon of a balloon catheter assembly disposed in the channel wherein the inflatable members are generally tubular and have a generally wedge shaped or pie shaped cross-section.

Claim 6. (Original) The device of claim 3 wherein the body further comprises a rigid tube in which the plurality of inflatable members are constrained, the tube having a first end with a first opening and a second end with a second opening and a passage therethrough.

Claim 7. (Original) The device of claim 6 further comprising first and second end caps, the first end cap disposed at the first end of the tube across the first opening and the second end cap disposed at the second end of the tube across the second opening.

Application No. 09/682865
Page 3

Amendment
Attorney Docket No. S63.2B-9720-US01

Claim 8. (Original) The device of claim 7 wherein the inflatable members extend from the first and second end caps, the inflatable members in relative alignment with one another, the first and second end caps supporting the inflatable members.

Claim 9. (Original) The device of claim 8 wherein the first end cap has an opening therethrough sized to receive at least a portion of a balloon catheter therethrough.

Claim 10. (Withdrawn) The device of claim 1 wherein the plurality of inflatable members includes at least two inflatable members disposed end-to-end along the length of the channel.

Claim 11. (Original) The device of claim 1 wherein the plurality of inflatable members are disposed in one or more spirals about the channel.

Claim 12. (Original) The device of claim 1 wherein the plurality of inflatable members includes at least two inflatable members which are circumferentially and axially displaced from one another.

Claim 13. (Withdrawn) The device of claim 12 wherein the inflatable members which are circumferentially and axially displaced from one another are shorter in length than the balloon.

Claim 14. (Previously Presented) In combination, a device for configuring an inflatable balloon of a balloon catheter assembly and a balloon portion of a balloon catheter assembly, the device comprising:

a body comprising a plurality of inflatable members defining a channel therebetween, the channel sized to accommodate at least a portion of a balloon catheter, each inflatable member having a balloon contacting portion, the inflatable members inflatable from a first size to a second size in which the balloon contacting portions apply an inward force to a balloon of a balloon catheter assembly disposed in the channel, the inflatable members arranged side-by-side about the channel, each of the inflatable members extending only part of the way about the channel, wherein

the balloon portion of a balloon catheter assembly is removably disposed in the channel.

Claim 15. (Withdrawn) The device of claim 1 wherein each of the inflatable members has an inflation lumen which opens into the inflatable member at a first end of the device and the balloon has an inflation lumen which opens into the balloon at a second end of the device opposite the first end of the device.

Claim 16-19 (Canceled)

Application No. 09/682865
Page 4

Amendment
Attorney Docket No. S63.2B-9720-US01

Claim 20. (Withdrawn) The device of claim 1 further comprising at least one constraining member disposed between adjacent balloon contacting portions.

Claim 21. (Withdrawn) The device of claim 20 wherein the constraining member is in the form of a slat.

Claim 22. (Currently amended) The device of claim 1 wherein the balloon contacting portion is made of a compliant material and the remainder of the inflatable member is made of a non-compliant material.

Claim 23. (Canceled)

Claim 24. (Withdrawn) The device of claim 1 wherein the inflatable member has an inflation lumen which opens into the inflatable member at a first end of the device and the balloon has an inflation lumen which opens into the balloon at a second end of the device opposite the first end of the device.

Claim 25. (Previously Presented) A method of configuring at least a portion of a medical balloon comprising the steps of:

providing a device for configuring an inflatable balloon of a balloon catheter assembly, the device comprising:

a body comprising a plurality of inflatable members defining a channel therebetween, the channel sized to accommodate at least a portion of a balloon catheter, each inflatable member having a balloon contacting portion, the inflatable members inflatable from a first size to a second size in which the balloon contacting portions apply an inward force to a balloon of a balloon catheter assembly disposed in the channel, the inflatable members arranged side-by-side about the channel, each of the inflatable members extending only part of the way about the channel;

disposing a medical balloon between the inflatable members;

at least partially inflating the medical balloon;

inflating the inflatable members so that the balloon contacting portions deform portions of the medical balloon inward;

at least partially deflating the medical balloon, the inwardly deformed portions of the medical balloon forming a plurality of balloon folds; and
removing the inflatable members from about the medical balloon.

Application No. 09/682865
Page 5

Amendment
Attorney Docket No. S63.2B-9720-US01

Claim 26. (Original) The method of claim 25 wherein each of the balloon folds extends along the entire length of the balloon.

Claim 27. (Withdrawn) The method of claim 25 wherein each of the balloon folds extends spirally about the balloon.

Claim 28. (Original) A method of configuring at least a portion of a medical balloon comprising the steps of:

- providing a device as in claim 8;
- disposing a medical balloon between the inflatable members;
- at least partially inflating the medical balloon;
- inflating the inflatable members so that the balloon contacting portions deform portions of the medical balloon inward;
- at least partially deflating the medical balloon, the inwardly deformed portions of the medical balloon forming a plurality of balloon folds; and
- removing the inflatable members from about the medical balloon.

Claim 29. (Original) The method of claim 28 wherein each of the balloon folds extends along the entire length of the balloon.

Claim 30. (Withdrawn) The method of claim 29 wherein each of the balloon folds extends spirally about the balloon.

Claim 31. (Withdrawn) A method of configuring at least a portion of a medical balloon comprising the steps of:

- providing a device as in claim 15;
- disposing a medical balloon between the inflatable members;
- at least partially inflating the medical balloon;
- inflating the inflatable members so that the balloon contacting portions progressively deform portions of the medical balloon inward starting from the first end of the device;
- at least partially deflating the medical balloon, the inwardly deformed portions of the medical balloon forming a plurality of balloon folds; and
- removing the inflatable members from about the medical balloon.

Claim 32. (Withdrawn) The method of claim 31 wherein each of the balloon folds extends along the entire length of the balloon.

Application No. 09/682865
Page 6

Amendment
Attorney Docket No. S63.2B-9720-US01

Claim 33. (Withdrawn) The method of claim 31 wherein each of the balloon folds extends spirally about the balloon.

Claim 34. (Withdrawn) A method of configuring at least a portion of a medical balloon comprising the steps of:

- a) providing a catheter comprising a medical balloon;
- b) disposing a plurality of inflatable members about the medical balloon, each inflatable member having a balloon contacting portion;
- c) at least partially inflating the balloon by supplying an inflation fluid thereto;
- d) at least partially inflating the inflatable members so that the balloon contacting portions contact the medical balloon and apply an inward force to the medical balloon.

Claim 35. (Withdrawn) The method of claim 34 further comprising the steps of:

- e) removing at least some of the inflation fluid from the medical balloon; and
- f) removing the inflatable members from about the medical balloon.

Claim 36. (Withdrawn) The method of claim 34 wherein said inflation fluid is heated.

Claim 37. (Withdrawn) The method of claim 34 wherein said inflatable member has a T_g and said inflation fluid is heated to a temperature below the T_g of said inflation fluid.

Claim 38. (Withdrawn) The method of claim 35 wherein the inflatable members are symmetrically disposed about the medical balloon and upon inflation apply a sufficient radially inward force to the medical balloon to form a plurality of indentations in the medical balloon, the medical balloon upon removal of the inflation fluid therefrom having a plurality of folds.

Claim 39. (Withdrawn) The method of claim 35 wherein the inflatable members are configured to apply a radially inward force to the medical balloon when they are inflated, the medical balloon upon removal of the inflation fluid therefrom having a plurality of folds.

Claim 40. (Withdrawn) The method of claim 39 wherein each of the balloon folds extends along the entire length of the balloon.

Claim 41. (Withdrawn) The method of claim 39 wherein each of the balloon folds extends spirally about the balloon.

Claim 42. (Withdrawn) The method of claim 35 wherein each of the inflatable members has an inflation lumen which opens into the inflatable member at a first end of the inflatable member and

Application No. 09/682865
Page 7

Amendment
Attorney Docket No. S63.2B-9720-US01

the balloon has an inflation lumen which opens into the balloon at an end of the balloon opposite the first end of the inflatable member.

Claim 43. (Withdrawn) The method of claim 42 wherein the inward force is applied progressively along the length of the medical balloon.

Claim 44. (Withdrawn) The method of claim 42 wherein the inward force is applied spirally about the medical balloon.

Claim 45. (Withdrawn) The method of claim 35 wherein the inflatable members are inflated simultaneously.

Claim 46. (Withdrawn) The method of claim 35 wherein the inflatable members are inflated in a predetermined sequence.

Claim 47. (Withdrawn) The method of claim 35 wherein the plurality of inflatable members includes a first inflatable member located at a first end of the balloon, a second inflatable member located at the middle of the balloon and a third inflatable member located at a third end of the balloon, the first, second and third inflatable members axially displaced from one another along the length of the balloon.

Claim 48. (Withdrawn) The method of claim 47 wherein during step e) the second inflatable member is inflated prior to the first and third inflatable members.

Claim 49. (Withdrawn) The method of claim 47 wherein during step e) the first inflatable member is inflated prior to the second inflatable member which is inflated prior to the third inflatable member.

Claim 50. (Withdrawn) A method of configuring at least a portion of a medical balloon comprising the steps of:

- a) providing a catheter comprising a medical balloon;
- b) at least partially inflating the medical balloon with an inflation fluid;
- c) applying a plurality of discrete axially spaced inward forces to the medical balloon; and
- d) deflating the medical balloon.

Claim 51. (Withdrawn) The method of claim 50 wherein the plurality of discrete forces are applied by a plurality of axially spaced inflatable members.

Claim 52. (Withdrawn) The method of claim 51 wherein the plurality of discrete forces are simultaneously applied with one another.

*Application No. 09/682865**Page 8**Amendment**Attorney Docket No. S63.2B-9720-US01*

Claim 53. (Withdrawn) The method of claim 51 wherein not all of the plurality of discrete forces are applied simultaneously.

Claim 54. (Withdrawn) The method of claim 50 wherein said inflation fluid is heated.

Claim 55. (Withdrawn) The method of claim 54 wherein said inflatable members have a T_g and said inflation fluid is heated to a temperature below the T_g of said inflatable members.

Claim 56. (Withdrawn) A medical balloon comprising a pleat, at least a portion of which extends in a direction which is non-parallel to the longitudinal axis of the balloon.

Claim 57. (Withdrawn) The medical balloon of claim 56 wherein the pleat has a first end and a second end which is circumferentially and longitudinally displaced from the first end of the pleat.

Claim 58. (Withdrawn) The medical balloon of claim 57 wherein the pleat spirals at least partially about a longitudinal axis of the balloon.

Claim 59. (Withdrawn) The medical balloon of claim 57 comprising a plurality of pleats each of which has a first end and a second end which is circumferentially and longitudinally displaced from the first end.

Claim 60. (Withdrawn) The medical balloon of claim 57 having a body portion comprising a plurality of longitudinally discontinuous pleats.

Claim 61. (Withdrawn) A medical balloon having a body portion with a first region with pleating and a second region with pleating, the second region axially displaced from the first region, the pleating in the second region differing in appearance from the pleating in the first region.

Claim 62. (Withdrawn) The medical balloon of claim 61 wherein the pleating in the second region is discontinuous from the pleating in the first region.

Claim 63. (Withdrawn) The medical balloon of claim 61 wherein the number of pleats in the first region differs from the number of pleats in the second region.

Claim 64. (Previously Presented) A device for configuring an expandable member for use in a bodily vessel comprising:

a body comprising a plurality of inflatable members defining a channel therebetween, the channel sized to accommodate at least a portion of the expandable member, the inflatable members inflatable inward into the channel so as to reduce in area a cross-section of the channel

Application No. 09/682865
Page 9

Amendment
Attorney Docket No. S63.2B-9720-US01

which extends perpendicular to a longitudinal axis of the channel, and the inflatable members arranged side-by-side about the channel, each of the inflatable members extending only part of the way about the channel.

Claim 65. (Previously presented) The device of claim 64 wherein the body further comprises a rigid tube in which the plurality of inflatable members are constrained, the tube having a first end with a first opening and a second end with a second opening and a passage therethrough.

Claim 66. (Previously presented) The device of claim 65 wherein the rigid tube is disposed between first and second end supports, at least one of the first and second end supports having an opening therethrough to provide access to the channel.

Claim 67. (Previously presented) The device of claim 65 wherein the rigid tube is disposed between first and second end supports, at least one of the first and second end supports having an opening therethrough to provide access to the channel.